

Title (en)

Electromagnetic flowmeter for unfilled fluid flow conduit

Title (de)

Magnetisch-induktiver Durchflussmesser für Freispiegelflüssigkeitsleitung

Title (fr)

Débitmètre électromagnétique pour conduites de liquide partiellement remplies

Publication

EP 0704682 A2 19960403 (EN)

Application

EP 95116484 A 19920903

Priority

- EP 92918706 A 19920903
- JP 22293991 A 19910903

Abstract (en)

The present invention contemplates as an object thereof reduction of measurement error brought about by change in conductivity of a fluid in an electromagnetic flowmeter for an unfilled fluid flow conduit. To this end, a main body part 24 includes two excitation coils Cu and Cl excited separately from each other and a pair of electrodes 22 disposed in opposition to each other. A transducer part 32 includes three circuits, i.e., a preamplifier 27, an offset compensation circuit (O. C.), an integrating circuit (I.) and a sample and hold circuit (S/H). There are provided two amplification circuits AMPu and AMPi, a switch S1, an A/D conversion circuit 30, an arithmetic processing circuit 31, a shunt resistor Rs, a shunt switch S2, an excitation circuit 25, an excitation timing circuit 26, and a conductivity measurement timing circuit 28. The shunt switch S2 is turned on/off by the conductivity measurement timing circuit 28, for thereby compensating for errors brought about in the flow rate measurement by changes in the conductivity. <IMAGE>

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

G01F 1/002 (2013.01); **G01F 1/586** (2013.01); **G01F 1/60** (2013.01); **G01F 25/13** (2022.01)

Citation (applicant)

- JP S59230115 A 19841224 - YAMATAKE HONEYWELL CO LTD
- JP S5248356 A 19770418 - FISCHER & PORTER CO

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EP2821756A1; DE102015116673A1; WO2018127735A1; DE102013013991A1; US9200933B2; EP3043153A1; EP3045875A2; EP3045874A2; DE102015116672A1; US9625301B2; DE102014015208A1; DE102013019182A1; DE102015116675A1; US9534943B2; US9766104B2; DE102015116679A1; DE102015116674A1; DE102015116676A1; US9689725B2; US9709426B2; US10118324B2; DE102015116674B4; DE102014007426A1; EP3048431A2; US10712185B2; DE102014007426B4

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